North Dakota Department of Public Instruction
Kirsten Baesler, State Superintendent
600 East Boulevard Avenue, Dept. 201, Bismarck, ND 58505-0440

Mathematics and Science **Partnership** Program (MSP)

ISSUE 3 APRIL-MAY 2014

This Issue

Beth-Larson-Steckler
Program Administrator
Title II, B Mathematics and
Science Partnership Program
(MSP)
600 E. Boulevard Ave. Dept. 201
Bismarck, ND 58505-0440
Phone: (701) 328-3544
Fax: (701) 328-0203
Email: esteckler@nd.gov

North Dakota Rocks

by Lindsey Lipp

Recently, two North Dakota graduate students; Lindsey Lipp and Alison Rohly, were accepted to the Clinton Global Initiative University (CGIU) with the generous funding of the American Association of University Women (AAUW) for their commitment to action with addressing young women involvement and interest in STEM (science, technology, engineering, and mathematics).

Lindsey has a Bachelor of Science in Biology from the University of North Dakota and a Master of Arts in Biomedical Sciences from Midwestern University, Glendale. She is currently working on her Ph.D. in Pharmaceutical Sciences at North Dakota State University. Lindsey's education and participation in a number of organizations have taught her to work hard, problem solve, and collaborate with others while providing leadership and organization.

Alison is a graduate student at North Dakota State University pursuing a doctorate degree in Coatings and Polymeric Materials. She graduated from Bethel University in St. Paul, Minnesota in February 2012 with a Bachelor of Science in Chemistry. While at Bethel, she actively participated in a variety of equal rights groups on campus and also worked at 3M during that time. Her passion for female empowerment is coupled with her passion for science through the CGIU commitment.

Historically, there has been a significant underrepresentation of women in the fields of STEM. Lindsey and Alison commit to address this issue within rural North Dakota by creating the program ***ND ROCKS (North Dakota Rural Outreach providing Chicks Knowledge of Science),*** aimed at engaging grades 7-9 girls in STEM through a variety of fun demonstrations and real-world scientific applications via the instruction of scientific female graduate students. Participation in this all-female program will instill not only scientific curiosity, but also equal opportunity and confidence for girls who desire to enter the playing field of the scientific community.

North Dakota Rocks (continued)

The gender imbalance within the scientific community is a rising challenge on both a national and a global level. Traditional societal gender roles often limit the desire of girls to engage with scientific learning and problem solving. While growing up, girls tend to have a pressure and/or desire to play with typical girl toys that focus more on being a nurturing caregiver than trying to solve problems or build things. The lack of exposure to STEM while girls are young leaves them at a disadvantage to boys, lacking confidence in areas of STEM, and missing an opportunity to develop an interest in STEM. The expectation for girls to become nurturing caregivers often compromises the pursuit of scientific intrigue, especially within rural communities throughout the United States. It is, therefore, essential to promote early science engagement for girls living within rural communities, pre-supposing any societal expectation by creating a safe and comfortable environment for girls to explore and divulge in science. A predominantly conservative rural North Dakota provides ample opportunity for ***ND ROCKS*** to become an effective program.

An essential component of Lindsey and Alison's Commitment to Action involves the development of close relationships with rural North Dakota school districts, as a means to supplement current courses such as biology, chemistry, physics, engineering, and mathematics. With the support of rural ND schools, the implementation of ND ROCKS would occur on one Saturday a month throughout the summer, reaching different districts each month. Participation of STEM **would be free and open to girls in grades 7-9**. Scientific female graduate students would volunteer their day to teach the students about exciting scientific topics, followed by real-world scientific applications and hands-on demonstrations to enhance engagement and interest in scientific fields. These female graduate students are capable of offering expertise in a variety of scientific disciplines, and may serve as a mentor and role model to girls interested in becoming future scientists. After this initial summer, there is opportunity to expand ND ROCKS into a multiple day camp or monthly sessions during the school year. Beyond increasing the frequency of sessions, range of reach may also be expanded with enough support. Collaborating with other programs interested in laying the foundations of STEM within youth could also be pursued to widen the exposure ND ROCKS participants have. Lindsey and Alison feel this goal is ambitious yet realistic and holds the potential for growth and development of young female scientists.

ND ROCKS would like to be able to survey the girls that participate and calculate how many actually did pursue education and careers in STEM; however, this would require many years and a lot of effort for all involved. Thus, it has been determined a more instantaneous way to measure the success of ND ROCKS is necessary. The measurement of success will be based on a test, given at the start of the program and again at the end of the program, to see if the participants learned and retained information and concepts discussed. There will also be a survey given at the end so the participants can evaluate the program and give feedback on their experience and areas in which ND ROCKS can improve.

For more information on *ND ROCKS* please contact:

Lindsey Lipp @
Lindsey.will@ndsu.edu
or 701-680-0437

Alison Rohly @
Alison.rohly@ndsu.edu
or 651-983-9054

News from the MSP Sites

Dickinson State University (DSU) Math and Science Partnership (MSP) is proud to announce our Summer 2014 workshops are open for enrollment! The DSU MSP summer course list has a variety of different topics from which to choose and a range from Common Core math and ELA to robotics, microbiology, and technology for educators. Experts in their respective fields have developed courses which will assist teachers in bringing new content, activities, and teaching methods into their classrooms. There are a total of ten course offered this summer on the DSU campus. The variety includes many two-day courses and our ten-day Summer Institute.

These workshops give North Dakota teachers the opportunity to earn one to four credits in courses that focus on math and science in conjunction with the CCSS or Next Generation Science Standards. Our workshops are sponsored by the MSP grant and include the unique opportunity for the participants to keep all supplies and gadgets provided in the course. DSU MSP is very excited to provide many professional development opportunities in southwest North Dakota!

We are happy to offer these classes with **NO** registration fee. Registration is online through the West River Teacher Center. Don't delay! Most of our workshops have a limit of 10-12 participants. Registration spots will fill quickly! To find out more information about our summer workshops and to register, please visit the West River Teacher Center Home page at http://dickinsonstate.edu/west_river_teacher_center and select SUMMER CATALOG from the left menu or follow the link www.dickinsonstate.edu/westriversummerclasses. If you have questions, please contact Hildee Fike, MSP Coordinator, at hildee.fike@dickinsonstate.edu, (701) 483-2398.

Reminder

Also available through DSU's MSP grant and the DSU STEM Initiative is the DSU Discovery Dome! It is a travelling planetarium for ALL ages and for ALL events in and out of school. To learn more or schedule the DSU Discovery Dome please visit: http://dsudiscoverydome.com/.

Discovery Dome

News from the MSP Sites (continued)

The University of North Dakota's (UND) V-STEM leadership team has been busy working with partner schools. Members of the V-STEM project leadership team–Mark Guy, Timothy Young, Mary Baker and Cindy Grabe–traveled to two additional partner schools/districts for orientation and discussion of the V-STEM project. V-STEM met with both Turtle Mountain Community Middle School educators, as well as Standing Rock Community Schools educators. Educators, as well as administrators were present at both of the sites and committed their support for a summer institute of professional development and project implementation in their science and mathematics classrooms during the 2014-2015 academic year.

The V-Stem faculty, including three UND scientists, an engineer, and a mathematician also met together and joined the sixth- and seventh-grade math and science teachers at Valley Middle School in Grand Forks for a variety of planning meetings and professional development sessions. The V-STEM leadership team met twice with each of the Valley Middle School sixth- and seventh-grade mathematics and science teachers during their planning periods to identify specific science and mathematics content and learning standards aligned with the goals of the V-STEM project. Sixth graders will complete a solar house, while seventh graders will complete a solar apartment complex.

The professional development provided to educators at Valley Middle school to prepare them for V-STEM included the following;

7th Grade

- Steven Ralph presented relevant life science concepts and visualizations with a focus on photosynthesis and how plants use the sun's light as an energy source.
- Yun Ji presented information and visualizations about the 'Engineering Design' process and the value of biomass as alternative energy sources.
- Michele Liams shared on how mathematics could assist students learn and problem solve these topics.

6th Grade

- Timothy Young presented relevant physical science concepts and visualizations with a focus on the nature of light, light as a wave, measuring solar energy, and the physics behind how a solar cell works.
- Yun Ji presented information and visualizations about the 'Engineering Design' process and the value of alternative energy sources like solar energy.
- Michele Liams provided support for the mathematics teachers regarding meeting their common core standards aligned with V-STEM goals.

News from the MSP Sites (continued)

Free Summer STEM Professional Development Opportunities Still Available at Minot State University

Minot State University (MSU) still has openings for K-12 teachers in its summer professional development offerings. Tuition and fees, on-campus housing, mileage, and books/materials are paid for by a Mathematics and Science Partnership (MSP) grant. The only cost to participating North Dakota teachers is a one-time $35 registration fee. For more information, visit www.minotstateu.edu/matmath or contact Laurie Geller at (701) 858-3282 or laurie.geller@minotstateu.edu.

Summer 2014 offerings include the following:

STEM Courses

Integrated Math and Science Courses for K-12 Teachers

- The Math-Science Connection for Grades K-8 Teachers
- The Math-Science Connection for Grades 7-12 Teachers

Special Topics STEM Courses

- Environmental Science Grades 7-12
- Probability and Statistics and the Common Core State Standards for Grades 7-12

Science Courses for Secondary Teachers

Geology Course

- Earth in Space: A Course in Astronomy and Planetary Science

Biology Course

- Heredity, Change, and The Natural Environment

Physics Course

- Electricity and Magnetism

Chemistry Course

- Environmental Chemistry for Teachers

Science Courses for Elementary Teacher

- Developing Proportional Reasoning in Elementary Children

Math Courses for Elementary Teachers

- Elementary/Middle School Probability and Statistics (offered in Minot and Mayville)
- Using Technology in Elementary/Middle School Math (offered in Minot and Mayville)

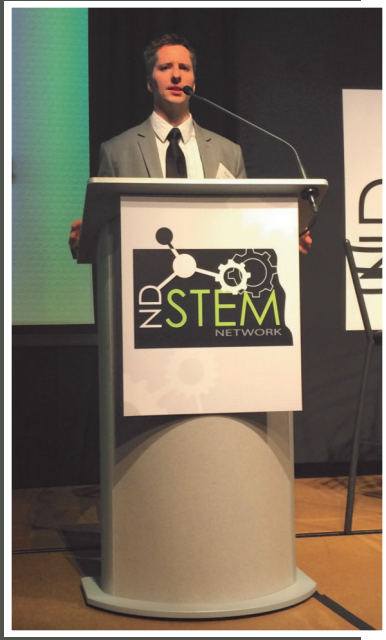
Math Courses for Secondary Teachers

- Geometry for Secondary School Teachers
- Calculus for Secondary School Teachers

News from the MSP Sites (continued)

Mayville State University (MSU) STEM Education has partnered with the University of North Dakota School of Engineering and Mines, West Fargo STEM Center, and the Red River Valley Education Cooperative to create the Educational Engineering Institute (EEI). The EEI is part of the Mathematics and Science Partnership (MSP) federal project and is an intensive professional development program in which teachers attend two day-long sessions and a two-week summer institute, and complete a year-long online class.

The program focuses on increasing participants' knowledge of the various fields of engineering and the use of the engineering design process in their classrooms. For more information, contact Sarah Sletten at (701) 788-4733 or sarah.sletten@mayvillestate.edu.



Ryan Aasheim –ND STEM Network

Take Root: Engaging STEM Strategies Summit

North Dakota STEM Network *Take Root: Engaging STEM Strategies* Summit took place Thursday April 3 through Saturday April 5, 2014 at Bismarck State College; National Energy Center of Excellence. The Summit was the first of its kind in North Dakota. The conference co -hosts included North Dakota Department of Public Instruction, Great Plains STEM Education, North Dakota Career and Technical Education and the Career Academy The Summit brought together key stakeholders in the area of STEM; school leadership, educators, students, business leaders and government leaders.

The Summit showcased how science, technology, engineering and mathematics (STEM) education is essential for all students as well as what skills North Dakota students need to complete in a global market. Featured speakers included Eric Jolly of the Science Museum of Minnesota; Cindy Moss, Director of Global STEM for Discovery Education; John Eger, and Director of Creative Economy Initiative at San Diego State University; Ken Wesson, Vice President Delta Education and John Moore, President Elect of the National Earth Science Teachers Association. Various breakout sessions featured demonstrations of STEM curriculum, including a portable GeoDome planetarium and Lego Mindstorm robotics.

Paul Keidel, Caroline McEnnis, Don Fischer, Rebecca Engleman and Linda Different Cloud

Mindstorm Robotics demonstration

Tim Young and Mark Guy; UND, Linda Different Cloud MSP site presentation

Eric Jolly, Science Museum of Minnesota

Grant Opportunities

American Honda Foundation

Overview

Since 1984, more than $32 million have been awarded to organizations serving over 115 million people in every state in the U.S.

The American Honda Foundation (AHF) was established by American Honda Motor Co., Inc., to commemorate its 25th anniversary in the U.S. and to show its appreciation of America's support through the years. It is Honda's desire that in every community in which it does business society will want Honda to exist.

Mission Statement

Help meet the needs of the American society in the areas of youth and scientific education by awarding grants to nonprofits, while strategically assisting communities in deriving long-term benefits.

Guidelines

The AHF engages in grant making that reflects the basic tenets, beliefs, and philosophies of Honda companies, which are characterized by the following qualities: imaginative, creative, youthful, forward-thinking, scientific, humanistic and innovative. We support youth education with a specific focus on the STEM (science, technology, engineering, and mathematics) subjects in addition to the environment. When considering the AHF as a potential funding source, please note the following:

Eligible Organizations

Nonprofit charitable organizations classified as a 501(c) (3) public charity by the Internal Revenue Service, or a public school district, private/public elementary and secondary schools, as listed by the U.S. Department of Education's National Center for Education Statistics (NCES).

To be considered for funding, organizations MUST have two years of audited financial statements examined by an independent CPA for the purpose of expressing an opinion if gross revenue is $500,000 or more. If gross revenue is less than $500,000, and the organization does not have audits, it may submit two years of financial statements accompanied by an independent CPA’s review report instead.

Grant Opportunities (continued)

American Honda Foundation (continued)

Geographic Scope

National

Funding Priority

Youth education, specifically in the areas of science, technology, engineering, mathematics, the environment, job training and literacy.

Other Important Information

Organizations may only submit **one** request in a 12-month period. This includes colleges and universities with several departments/outreach programs

- The grant range is from $20,000 to $75,000 over a one-year period. Proposals should be submitted online. Click here to start the online process.
- No faxed applications will be accepted.
- Support materials, such as annual reports, pamphlets/brochures, newsletters, articles, DVDs, etc., should be mailed to the following address:

American Honda Foundation
1919 Torrance Blvd.
Mailstop: 100-1W-5A
Torrance, CA 90501-2746
ahf@ahm.honda.com

Please note: The AHF does not make grants by text or email and does not require/request grantees to pay fees for grant funds. Should you receive a message to this effect, please disregard it and do not click any links or respond.

Deadline for Submission	Anticipated Board Review	Anticipated Grants Awards
May 1	**April**	**August 1**
August 1	**October**	**November 1**
November 1	**January**	**February 1**

Should the deadline for submission of applications fall on a weekend (Saturday or Sunday), the deadline will be extended to the following Monday.

Apply Online

To determine if your program/project meets the qualifications for consideration, the online application process begins with an Eligibility Quiz. **Click here** to start the quiz.

Grant Opportunities (continued)

North Dakota Department of Career and Technical Education: STEM Innovation and Integration Matching Grants

Title

STEM Innovation and Integration Matching Grant

Goal/Purpose

To encourage business and industry partners to participate in and contribute to STEM activities in K-12 education that innovates and integrates STEM methodologies into existing or new programming.

Eligible Recipients

K-12 districts, Area Career and Technology Centers, and REA's and other activities directly impacting K-12 education.

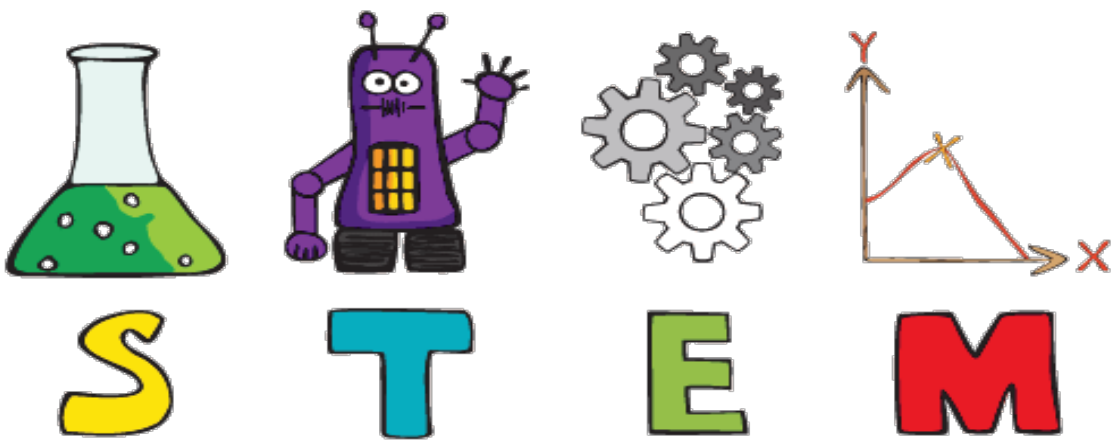
Proposal Deadline

Grants will be reviewed on a first come, first served basis. Subsequent applications will be reviewed on a continuing basis. Eligible recipients will be limited to one application for the biennium. No applications approved after March 1, 2015.

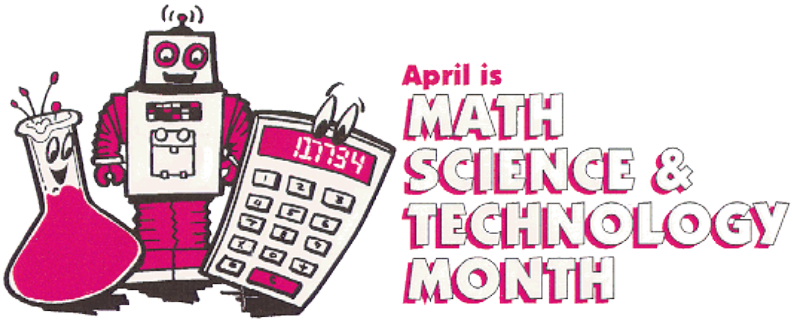
Total Funds Available

$150,000

For additional information, please visit www.nd.gov/cte/projects/grants/docs/STEMGrantRFP.pdf



Resources



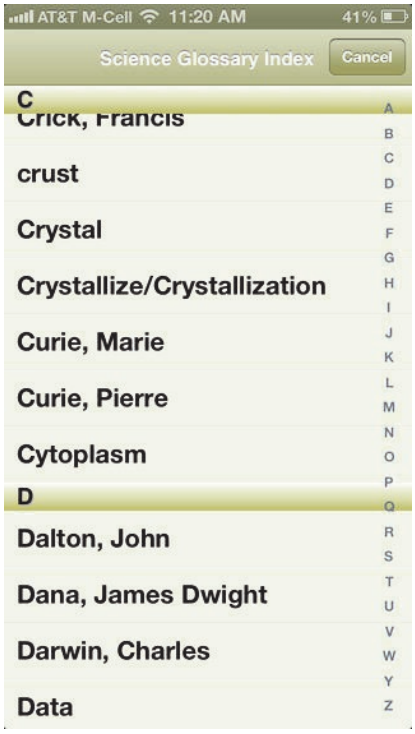
Discovery Education transforms classrooms, empowers teachers, and captivates students by leading the way in providing high quality, dynamic, digital content to school districts, large and small, rural and suburban, and everything in between. Discovery Education offers a breadth and depth of digital media content that is immersive and engaging, and brings the world into the classroom to give every student a chance to experience fascinating people, places, and events.

All content is aligned to state standards, can be aligned to custom curriculum, and supports classroom instruction regardless of the technology platform. One new element for educators is Connect the Dots: ***Discovery Communications' STEM Initiative*** which offers Discovery Education STEM Camp—a dynamic series of standards-aligned curricula available at **no cost** to schools, districts, non-profit organizations, and parents for use as part of summer camps, after school STEM programs, or wherever support is needed. STEM camp combines hands-on labs, engineering challenges, digital investigations, and more—all designed to immerse kids in the grand challenges of science set forth by the National Academy of Engineering. For more information go to: www.discoveryeducation.com/STEM/connect-the-dots.cfm?CFID=42553443&CFTOKEN=44653750.

Science Glossary (Free)

A glossary of scientific terms and short biographies that support our science education can be found at the following website, www.visionlearning.com. All definitions link to related terms and to free, detailed science learning modules. Though geared for high school and undergraduate students using our website, the glossary and modules are appropriate for anyone generally interested in science.

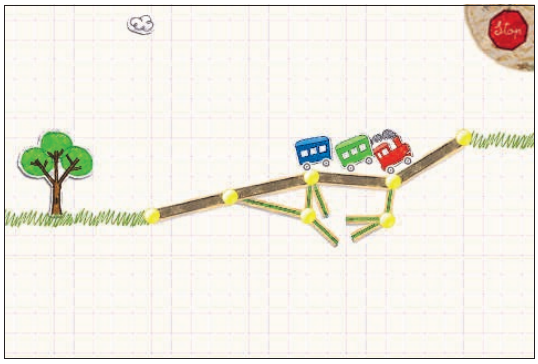
Science Glossary Index



Resources (continued)

Paper Bridge ($0.99)

Paper Bridge puts the player in charge of designing successful bridges with adequate structure and support to hold the weight of passing vehicles.



Put your engineering skills to a test, enjoy the uniquely relaxing soundtrack by guitarist Doug Jamieson and immerse yourself in the life of a bridge designer. Paper Bridge is the first independent title for iPhone platforms to boast a fully implemented physics system with breakable joints, realistically calculating weight distribution even in complex scenarios. This first release of Paper Bridge features 25 unique levels, and regular updates are certain to keep more content coming in at a steady rate. The game also makes use of the OpenFeint network to keep track of your scores worldwide and earn achievements.

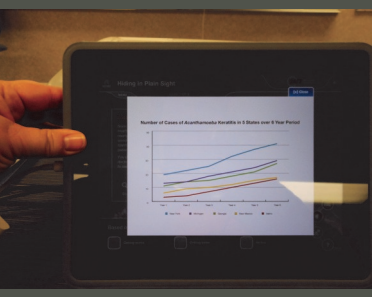
Sector 33 (Free)

It's a stormy Friday evening in Northern California as the evening rush of air traffic fast approaches the San Francisco Bay Area. All the flights going to San Francisco airport from the east pass through "Sector 33" – YOUR Sector of the airspace.

As the lead air traffic controller for Sector 33, you must merge the arriving planes into a single traffic stream as they pass over Modesto, CA on the western edge of your sector. The planes must be properly spaced and arrive over Modesto as soon as possible. Every minute you delay a plane during the traffic rush, that delay is passed on to ALL the other planes flying behind it. Although time is of the essence, to assure safety, the planes must NEVER violate minimum spacing requirements. Can you handle Sector 33?

Features

- 35 problems
- 2 to 5 airplanes
- Speed and route controls
- Thunderstorm obstacles levels of controller certification
- Locked levels
- Scoring for each problem
- Scoring for each certification level
- In-game introduction
- In-game hints
- Help section
- Extra videos
- Links to related websites
- Links to social websites



STEM in North Dakota Classrooms

After attending the MSP program at Mayville State University last summer, Cindy Jensen incorporated STEM into the design of her units for FACS (Family & Consumer Science) at South Middle School in Grand Forks, North Dakota. Ms. Jensen teaches a unit of Food Safety and by incorporating STEM, she feels she has strengthened the units. One example of Ms. Jensen incorporating STEM into a unit is the utilization of the iPad app 'Outbreak' by the Center for Disease Control as a means of assessment. Below is a picture of her eight grade class at South Middle School incorporating STEM into FACS. This is just one of the ways Cindy is incorporating STEM in the FACS curriculum. You can access the Action Plans for implementation and student worksheet at www.dpi.state.nd.us/titleII/nd-resources.shtm.

For more information on what Ms. Jensen is doing in her classroom you can contact her at:

Cindy Jensen
South Middle School
1999 47th Avenue S.
Grand Forks, ND 58201
701-746-2345, ext. 3466

Information of Outbreak Application

If you haven't tried the app yet, now's the perfect time to get started! Scientists and experts from across CDC have put their expertise and know-how into developing a realistic, exciting app that turns your iPad into its own version of CSI.

Get clues, analyze data, solve the scenario, and save lives! In this fun app, you get to be the Disease Detective.

Do you quarantine the village? Interview people who are sick? Run more lab tests? The better your answers, the higher your score - and the more quickly you'll save lives. You'll start out as a Trainee and can earn badges by solving scenarios, with the goal of earning the top rank: Disease Detective.

New outbreaks happen every day, and CDC's Disease Detectives are on the front lines, working 24/7 to save lives and protect people. When a new outbreak happens, Disease Detectives are sent in to figure out how the outbreak started before it spreads further.

In this app, you get to Solve the Outbreak! You'll also:

- Learn about diseases and outbreaks in an engaging way.
- See how CDC's Disease Detectives save lives around the world.
- Post your scores on Facebook or Twitter and challenge your friends to play!

Update from Department of Education

Science, Technology, Engineering and Math: Education for Global Leadership

The United States has become a global leader, in large part, through the genius and hard work of its scientists, engineers, and innovators. Yet today, that position is threatened as comparatively few American students pursue expertise in the fields of science, technology, engineering, and mathematics (STEM)—and by an inadequate pipeline of teachers skilled in those subjects. President Obama has set a priority of increasing the number of students and teachers who are proficient in these vital fields.

The Need

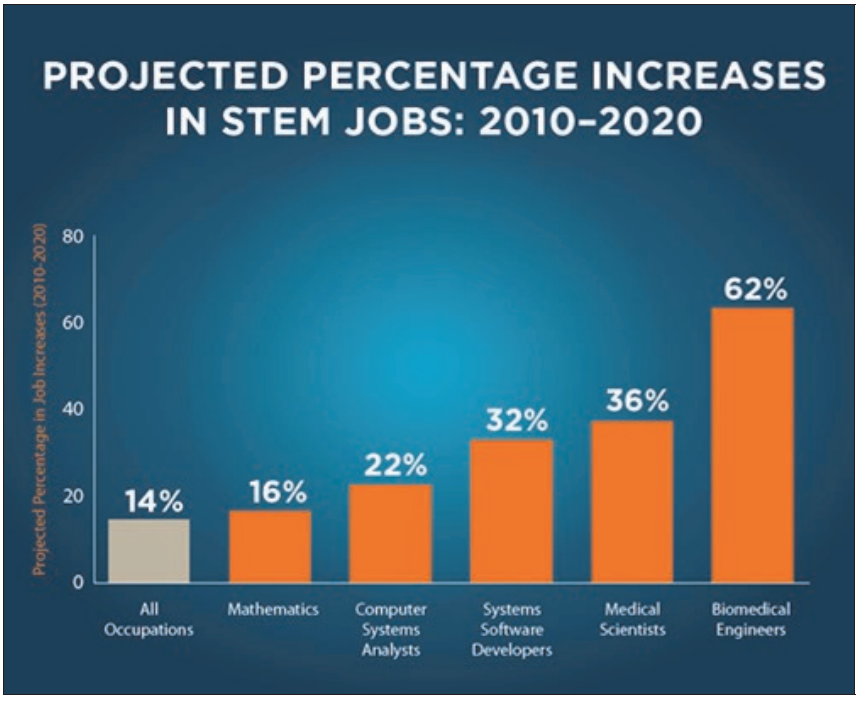
Only 16 percent of American high school seniors are proficient in mathematics and interested in a STEM career.

The Goals

President Obama has articulated a clear priority for STEM education: within a decade, American students must "move from the middle to the top of the pack in science and math."

The Plan

The Committee on STEM Education (CoSTEM), comprised of 13 partner agencies—including all of the mission science agencies and the Department of Education—will facilitate a cohesive national strategy, with new and repurposed funds, to reorganize STEM education programs and increase the impact of federal investments in five areas: P-12 STEM instruction; increasing and sustaining public and youth engagement with STEM; improving the STEM experience of undergraduate students; better serving groups historically underrepresented in STEM fields; and designing graduate education for tomorrow's STEM workforce.



Update from Department of Education (Continued)

The President's Fiscal Year 2015 Budget Proposal

Included in the fiscal year 2015 budget are several investments designed to improve teaching and learning in STEM subjects for teachers and students in our nation's schools. Key elements of the President's proposal include:

- **STEM Innovation Proposal:** This proposal includes $170 million in new funding that will help to train the next generation of innovators. Key activities include:

- **STEM Innovation Networks ($110 million):** This program will award grants to school districts in partnership with colleges, and other regional partners to transform STEM teaching and learning by accelerating the adoption of practices in P-12 education that help to increase the number students who seek out and are well-prepared for postsecondary education and careers in STEM fields.

- **STEM Teacher Pathways ($40 million):** To support President Obama's goal of preparing 100,000 effective STEM teachers, this program will provide competitive awards to high-quality programs that recruit and train talented STEM educators for high-need schools.

- **National STEM Master Teacher Corps ($20 million):** This program will identify, refine, and share models to help America's best and brightest math and science teachers to make the transition from excellent teachers to school and community leaders and advocates for STEM education. The program will enlist, recognize, and reward a national corps of outstanding STEM educators to help improve STEM teaching and learning in their schools and communities.

Together, these programs will identify and implement effective approaches for improving STEM teaching and learning; facilitate the dissemination and adoption of effective STEM instructional practices nationwide; and promote STEM education experiences that prioritize hands-on learning to increase student engagement, interest, and achievement in the STEM fields.

North Dakota Council on the Arts

STEM the Arts and Humanities

by Rebecca Engelman

As the Arts in Education Director for the North Dakota Council on the Arts, a member of the North Dakota STEM Education Network, and a participant in the first North Dakota STEM Summit, I appreciate the opportunity to be a part of the exciting conversation currently taking place between industry and education in North Dakota.

As our state takes on the role as a national and international energy leader, developing a diverse economy and workforce is paramount to creating jobs, sustaining growth, and enriching lives beyond the oil fields. Scientists and recent research indicate that relying on STEM education alone will not accomplish this task. Rather, a trans-disciplinary, integrated approach that includes STEM and the Arts and Humanities will be needed to meet the future needs of our students, our communities, and the world at large.

Many tend to draw a line that divides STEM education from the Arts and Humanities; however, when it comes to education, and more importantly to our students, this division serves no one well. Once inextricably linked – the research clearly recognizes that the Arts, Humanities, and Sciences are better together than apart. They are all tools or strategies from which to explore our world, shaping our understanding of what it means to be human. When combined, they create a powerfully effective force for driving the economy, and for developing creativity and innovation.

The Arts and Humanities have four main roles in STEM education and for ultimately producing a more creative, innovative, and scientifically literate public. The Arts and Humanities are a way for people, especially reluctant and non-linear learners, to enter into the sciences. Because of their intrinsic nature, the Arts and Humanities can be a highly motivating factor for drawing in students, from Pre-K to the university level, and demonstrating how STEM applies to real-life interests.

The Arts and Humanities are a way to communicate the sciences. They teach people how to talk and write about their work, how to have a dialogue, how to sell a product, or share an idea: all important elements within the workforce.

The Arts and Humanities provide opportunities for trans-mediation to occur – that is – translation from one symbol system to another – a powerful tool, or strategy for developing understanding and literacy. The Arts and Humanities develop skills that many scientists, mathematicians, and engineers know are vital to success. Skills that are borrowed from the arts as scientific skills. These include the ability to:

- Draw on curiosity
- Observe accurately
- Perceive an object in a different form
- Construct meaning and express one's observations accurately
- Work effectively with others
- Think spatially (how does an object appear when I rotate it in my head?)
- Perceive kinesthetically (How does it move?)

STEM the Arts and Humanities (Continued)

Currently, several school districts across the state of North Dakota have, or are planning on decreasing or eliminating arts programming for their students, especially at the elementary level. There are several reasons for this decrease, including; limited funding, a shift in priorities, focus on testing, lack of time within the school day, lack of instructors, and/or limited administrative and local support. This, too, serves no one well. With our healthy economy, North Dakota is in a unique and unprecedented position to explore ways of providing all students, regardless of their location and financial resources, to a full and complete education.

As we continue the discussion of industry and education across the state of North Dakota, it may be helpful to clarify what it is exactly we hope to achieve. If our goal is to prepare young people to be innovative scientists, technologists, engineers, and mathematicians, who not only fill jobs but also create jobs, who are culturally aware, communicate effectively, and contribute to the vitality and quality of life in their communities, then we need to think bold. Our educational system needs to mirror our goal by providing support, financial resources, and expertise to teachers and schools for trans-disciplinary, integrated learning that includes not only STEM but also the Arts and Humanities.

MSP Administrative News

By Beth Larson-Steckler

Close out 2013-2014 Program

REMINDER: The fiscal period for year one is October 1, 2013 through September 30, 2014. The MSP sites need to submit a Final Financial Report by **October 15, 2014,** to close out year one of the grant**.** The Final Financial Report can be found at www.dpi.state.nd.us/forms/sfn60449.pdf. All reports must be submitted to:

Patty Carmichael
Title II, Part B Fiscal Officer
(701) 328-3264
pcarmichael@nd.gov

Application Process 2014-2015

In order to be eligible for the following year, the MSP sites need to submit an application.

Suggested Webinar for MSP Sites

Establishing Validity and Reliability for Locally Developed Instruments (suggested for MSP sites)

Description

The *Common Guidelines for Education Research and Development* suggests that evidence of and strategies for ensuring reliability and validity of data collection instruments should be provided in any research or evaluation plan. What is validity? How can I ensure the instruments I use are valid measures of the project? What is reliability? How can I accurately measure reliability? What are some ways to improve instrument validity and reliability? The

The *What Works Clearinghouse Standards* will provide a foundation to support our discussion about what types of validity and reliability evidence should be provided for MSP project evaluations. Specifically, we will discuss how to demonstrate that a measure is clearly defined, has a direct interpretation, and measures the intended constructs. We will also introduce a method for sharing instrument validity and reliability information through the TEAMS project.

When: May 21, 2014 2:00 p.m. (Eastern)

To register visit: http://teams.mspnet.org/index.cfm/webinars/webinar_info?id=321

News from the Federal Title Programs Office

MSP Reminders

Request for Funds

All federally funded projects must operate on a reimbursement basis. Once grant funds have been expended, sites may submit a Request for Funds (RFF) (SFN 14660). The RFF form can be accessed at www.dpi.state.nd.us/titleII/partB.shtm on the departments website under forms.

Budget Revision

As a reminder, a budget revision is needed if sites transfer funds among budget categories or exceed 10% of the total grant in any line item. A budget revision must also be submitted if changes to the scope of objectives of the project occur, even if it doesn't require a budget change. The Budget Revision from (SFN 9035) can be accessed at www.dpi.state.nd.us/titleII/partB.shtm on the departments website under forms. Request for Funds and Budget Revisions must be sent or emailed to:

Patty Carmichael, Fiscal Officer
Title II, Part B
pcarmichael@nd.gov
Phone: (701) 328-3264
Fax: (701) 328-0203

Contact Information

Laurie Matzke Director Federal Title Programs (701) 328-2284 lmatzke@nd.gov	**Beth Larson-Steckler** Program Administrator Title II, Part B (701) 328-3544 esteckler@nd.gov	**Patty Carmichael** Fiscal Officer Title II, Part B (701) 328-3264 pcarmicahel@nd.gov

Visit our Title II, Part B website at www.dpi.state.nd.us/titleII/partB.shtm